REMARKS

The disclose has been objected to due to informalities. The abstract has been amended to remove the noted informalities.

Claims 10-19 have been rejected under 35 USC 112, first paragraph, as based on a single means claim. Claims 1-9 and 18-19 have been rejected under 35 USC 112, second paragraph. Claims 1-19 were canceled, and new claims 20-28 were added via the preliminary amendment filed on November 1, 1999 with the national stage application. Hence, the rejection to claims 1-19 under 35 USC 112, first and second paragraphs, is moot. The Examiner does not appear to have properly viewed the amendments made to the claims.

Claims 1-3, 5-15 and 17-19 have been rejected under 35 USC 102(b) as anticipated by Barbulescu. The rejection is respectfully traversed below, where the response addresses claims 20-38 as corresponding to original claims 1-19.

Barbulescu discloses a soft decision process for channel coding known as a modified MAP (maximum a posteriori algorithm). The process according to Barbulescu essentially corresponds to the decoding process specified in the introduction to the description and known from {3}, a soft-decision decoding process based on a so-called log-likelihood algebra (see Description, page 1 and Barbulescu, section 2.9 "Steps of algorithm"). In Barbulescu, as in {3}, a measure of reliability (log-likelihood or soft-output L) is formed from an electrical signal to form a signal value (see Barbulescu, section 2.9 "Steps of algorithm"). The digital signal value is then determined depending on the measure of reliability at any given time. The disadvantages of such an approach are sufficiently mentioned in the introduction to the description.

In the invention, on the other hand, the measure of reliability, *i.e.*, defined by the invention (see for example claims 20 and 29) as an approximation of the measure of reliability, is formed ***in such a way that a target function, which includes a non-linear regression model of a transmission channel*** through which the electrical signal is transmitted, is optimized. Contrary to the Examiner's opinion, Barbulescu fails to disclose such formation of the measure of reliability, as required by the invention. This is so because, in contrast to the approach of the invention, in Barbulescu the formation of the measure of reliability takes place "directly," *i.e.*, not as a result of application

and/or optimization of a target function that includes a non-linear regression model of a transmission channel. This is apparent in the list of process steps according to Barbulescu, page 20, section 2.9 "Steps of algorithm." Thus, although Barbulescu and {3} take into account the transmission behavior of the channel during formation of the soft-output (L values) and/or the log-likelihood, this L is formed directly, *i.e.*, analytically (see equation expansion 2.4 to 2.40), and not through optimization of a target function (as disclosed by the invention). Accordingly, the term "target function" does not appear in Barbulescu.

Original claim 4 would be allowable if rewritten in independent for to include any base and intervening claim limitations.

Since the recited method is not disclosed by the applied reference, claims 20-38 are believed to be patentable and in condition for allowance. An indication of the same is solicited.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned **"Version with markings to show changes made"**.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 449122017000.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

20. (Amended) A method for determining at least one digital signal value from an electrical signal transmitted via a transmission channel, said electrical signal having signal information and redundancy information for said signal information determined from said signal information, the method comprising ~~the steps of~~:

optimizing a target function having a model of a transmission channel via which said electrical signal was transmitted;

approximating a dependability degree for forming a digital signal value from said electrical signal based on said optimized target function; and

determining said digital signal value dependent on said dependability degree, wherein the model is a non-linear regression model of said transmission channel.

29. (Amended) An arrangement for determining at least one digital signal value from an electrical signal transmitted via a transmission channel, said electrical signal having signal information and redundancy information for said signal information, said arrangement comprising:

a computer unit having a processor and a memory including a program comprising ~~the steps of~~:

optimizing a target function having a model of a transmission channel via which said electrical signal was transmitted;

approximating a dependability degree for forming a digital signal value from said electrical signal based on said optimized target function; and

determining said digital signal value dependent on said dependability degree, wherein the computer unit program is a non-linear regression model of said transmission channel.